

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Hardarshan S. Valia et al.  
Application No.: 09/846,829  
Filed: May 1, 2001  
Title: METHOD FOR PRODUCING BLAST FURNACE COKE THROUGH  
COAL COMPACTION IN A NON-RECOVERY OR HEAT  
RECOVERY TYPE OVEN  
Group/Art Unit: 1764  
Examiner: Nina Bhat  
Docket No.: ISP0086

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

In response to the Final Office Action mailed June 14, 2007, Applicants submit this Pre-Appeal Brief Request for Review, in conjunction with the enclosed Notice of Appeal. No amendments to the claims are submitted with this request. Accordingly, the claims stand pending in the form set forth in Applicants' Response to Office Action filed March 22, 2007.

Applicants request review of the currently pending application for the reasons set forth herein. Applicants believe the Examiner has made a clear error in rejection the claims based upon the prior art of record.

**REMARKS**

Claims 1-3 and 5-18 are currently pending in the present application. Claims 1-3, 5-9 and 14-18 stand rejected under 35 U.S.C. §§ 102 and 103. Claim 13 has been allowed, and the Examiner objects to claims 10-12 as including allowable subject matter but depending from a rejected base

claim. In rejecting the claims, the Examiner relies upon two prior art references, U.S. Patent No. 6,059,932 to Sturgulewski (hereinafter referred to as "Sturgulewski") and U.S. Patent No. 6,290,494 to Barkdoll (hereinafter referred to as "Barkdoll").

Of the pending claims, claims 1, 7 and 14 represent the only rejected independent claims. In the Final Office Action, the Examiner rejects these claims under 35 U.S.C. § 102(e) based upon the disclosures of Sturgulewski and Barkdoll.

#### **The Rejection of Claim 7 Represents a Clear Error**

Claim 7 claims a method of producing coke using a non-recovery type oven. The claimed method includes, in part, the steps of disposing a volume of coal into a non-recovery type oven; heating the volume of coal to produce a coke mass; moving the coke mass from the oven; and quenching the coke mass. In the Office Action, the Examiner never details the manner in which either Barkdoll or Sturgulewski anticipate claim 7. For example, on pages 2 and 3 of the Final Office Action, the Examiner fails to set forth which portion of Barkdoll specifically discloses quenching. On pages 3 through 4 of the Office Action, the Examiner described the manner in which Sturgulewski allegedly anticipates claim 7. Again, the Examiner fails to describe where Sturgulewski teaches a quenching step. The Applicants' review of both Barkdoll and Sturgulewski fails to reveal where either reference teaches quenching.

In page 4 of the Office Action, when discussing the allowable subject matter of claims 10-12, the Examiner states: "the prior art fails to teach and/or suggest the quenching step as claimed by the applicant." Moreover, with respect to the allowability of claim 13 the Examiner also explains that "[t]here is no suggestion of the quenching steps as claimed in the process described by applicant."

Applicant's review of both Barkdoll and Sturgulewski failed to find any disclosure relating to quenching. Since claim 7 includes the step of quenching a coke mass, which the Examiner has admitted is not shown in the prior art, Applicants believe the Examiner has made a clear error in rejecting claim 7 based upon these references. Accordingly, Applicants submit claim 7 is in condition for allowance. Furthermore, since dependent claims 8-12 also depend from claim 7, Applicants believe these claims are also allowable over the cited prior art.

#### **Claims 1 and 14**

The Examiner's rejections of claims 1 and 14 under 35 U.S.C. § 102(e), or in the alternative under § 103(a), based upon the disclosure of Sturgulewski and Barkdoll represent a clear error.

**The Rejection of Claims 1 and 14 Based Upon Sturgulewski Represent a Clear Error.**

Claim 1 sets forth a method of producing blast furnace coke including, in part, the steps of disposing a volume of loose coal into a container; applying a force to the volume of loose coal in the container to produce a volume of compacted coal; disposing the volume of compacted coal into a non-recovery type oven; and heating the volume of compacted coal to produce coke with an apparent specific gravity of about 1.05. Similarly, claim 14 sets forth a method for producing blast furnace coke comprising, in part, the steps of disposing a volume of loose coal into a container; applying force to the volume of loose coal in the container to produce a volume of compacted coal; and disposing the volume of compacted coal into a non-recovery type oven.

In rejecting the claims, the Examiner asserts that Sturgulewski teaches a coal compaction system and method for producing coke in a non-recovery oven. The Examiner acknowledges Sturgulewski does not specifically teach producing coke with an apparent specific gravity of about 1.05. The Examiner further asserts Sturgulewski discloses that "a bed of coal is then inserted into the oven through the charging doors and the surface of the coal bed generates combustible gases due to radiant energy absorbed from the oven door. There is a non-cantilevered coal charging conveyor sled compaction system which compacts the loose coal prior to coking." See the Final Office Action, page 3. Based upon this understanding, however, the Examiner asserts "[t]he coke produced in this system would inherently possess an apparent specific gravity as claimed by applicant absent an evidentiary showing this feature would not be inherent because it has been taught in Sturgulewski that loose coal is compacted and then subjected to a coking oven." *Id.* at page 4. Applicant disagrees that Sturgulewski teaches a compaction system capable of compacting the loose coal prior to coking.

Sturgulewski clearly teaches charging a non-recovery oven with uncompressed coal and then heating the uncompressed coal in the oven as the coal is being compressed. As explained in Sturgulewski at column 3, lines 22-24, "[i]nitially, the oven refractory is heated, e.g. to about 2500° F., for example, by a fuel gas burner inserted into an opening (not shown) in an oven door." Sturgulewski continues at lines 26-29, "[a] bed of coal then is inserted into the oven through the charging doors, and the surface of the coal bed immediately generates combustible gases due to the radiant energy absorbed." Moreover, in describing the charging conveyor / compactor, Sturgulewski explains that "[d]ue to the high temperature encountered by the coal charging and compacting means while inside the oven chamber during coal charging and compaction, it is necessary to provide such mechanism with adequate heat protection." See Sturgulewski at column 5, lines 28-32. Applicants' review of Sturgulewski fails to find any teaching of charging the oven with uncompressed coal, compressing the coal in the oven and then heating the compressed coal.

Clearly, the Examiner has made a clear factual error in reading the disclosure of Sturgulewski, and Sturgulewski actually teaches charging the oven with uncompacted coal and then compacting the coal in the oven as the coal is heated. The Examiner has made a clear factual error in reading Sturgulewski as teaching the charging of an oven with compacted coal. Since claims 1 and 14 both require that the coal be first compressed and then added to the oven, Sturgulewski does not anticipate claims 1 and 14. In addition, since dependent claims 2, 3, 5 and 6 depend from independent claim 1, and dependent claims 15-18 depend from independent claims 1, these dependent claims are also allowable over Sturgulewski.

**The Rejections to Claims 1 and 14 Based Upon Barkdoll represent a Clear Error**

The Examiner has rejected independent claims 1 and 14 based upon the teachings of Barkdoll. In rejecting these claims, the Examiner asserts

[t]he steps as taught in Barkdoll fully anticipates applicants method claims of providing a container the [sic] container would be the charging plate in association with the retractable sidewalls in the chamber. The coking oven is a non-recovery type coke oven, which is used in making the coke. Admittedly the apparent specific gravity has not been specifically taught however, the compaction method taught in Barkdoll imparts the same type of force to the coal, the heating takes place in a coke oven it [sic] would have been obvious if not inherent in the method described in Barkdoll to produce a coke with an apparent specific gravity of about 1.05.

See the Office Action, pages 2-3. Applicant disagrees that Barkdoll teaches charging the coking oven with compacted coal in order to produce coke with an apparent specific gravity of about 1.05.

Barkdoll clearly sets forth a method of producing coke in which the oven is charged with compressed and uncompressed coal. Specifically, in the Summary of the Invention, Barkdoll sets forth a method utilizing a first charging plate and a second charging plate "to yield a resulting coal bed within the oven comprising a compacted coal bed overlying uncompacted coal." See Barkdoll, column 3, lines 34-39. Barkdoll continues: the "uncompacted coal chamber preferably holds from about 5 to about 20 wt. % of the total coal." See Barkdoll, column 7, lines 19-21.

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (*emphasis in original*). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established." See MPEP § 2112.01 (*citing In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977)) (*emphasis added*). Accordingly, if the process disclosed by the prior art differs from

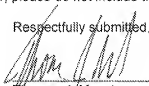
that set forth in the claims, it follows that the prior art does not necessarily disclose all of the limitations set forth in the claims of the application.

The Examiner has made a clear error in asserting that Barkdoll discloses charging the oven with compacted coal, as set forth in claims 1 and 14. Barkdoll teaches charging the oven with both compacted and uncompact coal. Since claims 1 and 14 require that the coal be compacted prior to charging the oven, the process set forth in claims 1 and 14 clearly differ from the teachings of Barkdoll. Thus, Barkdoll does not inherently teach all of the limitations set forth in claims 1 and 14. Accordingly, the Examiner has made a clear error in rejecting claims 1 and 14 based upon Barkdoll, and independent claims 1 and 14 are allowable over the cited prior art. Moreover, since dependent claims 2, 3, 5 and 6 depend from independent claim 1 and dependent claims 15-18 depend from independent claim 14, these claims are also in condition for allowance.

#### CONCLUSION

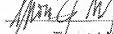
As set forth above, Applicants assert that the Examiner has made clear errors in rejecting the claims of the pending application. Specifically, as set forth above, the Examiner committed a factual error with respect to the manner in which the teachings of Barkdoll and Sturgulewski relate to charging the oven and quenching a coke mass. Thus, Applicants request that the rejections of claims 1-3, 5-9 and 14-18 and objections to claims 10-13 be withdrawn and the application be passed to issuance. If necessary to affect a timely response, please consider this paper a request for an extension of time, and charge any shortages in fees, or apply any overpayment credits, to Baker & Daniels' Deposit Account No. 02-0387 (26041.50057). However, please do not include the payment of issue fees.

Respectfully submitted,



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I hereby certify that this correspondence is being electronically served upon the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 13, 2007.

  
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